Missouri Department of Natural Resources

PUBLIC NOTICE

DRAFT MISSOURI STATE OPERATING PERMIT

DATE: September 22, 2006

In accordance with the state Clean Water Law, Chapter 644, RSMo, Clean Water Commission regulation 10 CSR 20-6.010, and the federal Clean Water Act, the applicants listed herein have applied for authorization to either discharge to waters of the state or to operate a no-discharge wastewater treatment facility. The proposed permits for these operations are consistent with applicable water quality standards, effluent standards and/or treatment requirements or suitable timetables to meet these requirements (see 10 CSR 20-7.015 and 7.031). All permits will be issued for a period of five years, unless noted otherwise in the Public Notice for that discharge.

On the basis of preliminary staff review and the application of applicable standards and regulations, the Missouri Department of Natural Resources (MDNR), as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions. The proposed determinations are tentative pending public comment.

Persons wishing to comment on the proposed permit conditions are invited to submit them in writing to the Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, Missouri 65102, ATTN: NPDES Permits and Engineering Section / Permit Comments. **Please include the permit number in all comment letters.**

Comments should be confined to the issues relating to the proposed action and permit(s) and the effect on water quality. The MDNR may not consider as relevant comments or objections to a permit based on issues outside the authority of the Clean Water Commission, (see Curdt v. Mo. Clean Water Commission, 586 S.W.2d 58 Mo. App. 1979).

All comments must be postmarked by October 23, 2006 or received in our office by 5:00 p.m. on October 25, 2006. The requirement of a signed document makes it impossible to accept email comments for consideration at this time. Comments will be considered in the formulation of all final determinations regarding the applications. If response to this notice indicates significant public interest, a public meeting or hearing may be held after due notice for the purpose of receiving public comment on the proposed permit or determination. Public hearings and/or issuance of the permit will be conducted or processed according to 10 CSR 20-6.020.

Copies of all draft permits and other information including copies of applicable regulations are available for inspection and copying at DNR's website, http://www.dnr.mo.gov/env/wpp/index.html, or at the Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, Missouri 65102, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday.

Public Notice Date: September 22, 2006
Permit Number: MO-0035742
Southeast Regional Office

FACILITY NAME AND ADDRESS	NAME AND ADDRESS OF OWNER
Lake Forest Estates Subdivision Lakewood Drive, Ste. Genevieve, MO 63670	Lake Forest Estates Community Association 13100 Lakewood Drive, Ste. Genevieve, MO 63670
RECEIVING STREAM & LEGAL DESCRIPTION	**TYPE OF DISCHARGE**
Receiving Stream: Big Bottom Creek (C) Legal Description: SW ¼, SW ¼, Survey 2046, N ½, Sec. 1 (projected), T37N, R7E Ste. Genevieve County Latitude/Longitude: +3757223/-09012300	

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.	MO-0035742
Owner:	Lake Forest Estates Community Association
Address:	13100 Lakewood Drive, Ste. Genevieve, MO 63670
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Lake Forest Estates Subdivision
Facility Address:	Lakewood Drive, Ste. Genevieve, MO 63670
Legal Description:	SW ¼, SW ¼, Survey 2046, N ½, Sec. 1 (projected), T37N, R7E, Ste. Genevieve County
Latitude/Longitude:	+3757223/-09012300
Receiving Stream:	Big Bottom Creek (C)
First Classified Stream and ID:	Big Bottom Creek (C) (01746) 303(d) list
USGS Basin & Sub-watershed No.:	(07140101-230003)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 – Subdivision - SIC #4952
Two cell aerated lagoon/three cell equalization lagoon/sludge is retained in lagoon.
Design population equivalent is 1040.
Design dry weather flow is 118,300 gallons per day.
Average wet weather flow is 376,700 gallons per day. Actual flow is 73,564, gallons per day.
Design sludge production is 15.6 dry tons/year.

Continued next page

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

Effective Date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

Expiration Date

Edward Galbraith, Director of Staff, Clean Water Commission

Outfall S1 – Instream monitoring, approximately 100 yards downstream of outfall 001

Outfall S2 – Instream monitoring, at highway O, 1.25 miles downstream of outfall 001

Legal Description:	SW ¼, SW ¼, Survey 2046, N ½, Sec. 1 (projected), T37N, R7E, Ste. Genevieve County
Latitude/Longitude:	+3758135/-09012056
Receiving Stream:	Big Bottom Creek (C)
First Classified Stream and ID:	Big Bottom Creek (C) (01746) 303(d) list
USGS Basin & Sub-watershed No.:	(07140101-230003)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until two years and 364 days after the date of issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Ammonia as N	mg/L	*		*	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE _____. T

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective one day before the date of expiration of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Ammonia as N	mg/L				once/month	grab
(May 1 – Oct 31)		3.7		1.9		
(Nov 1 – Apr 30)		7.5		3.7		

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE _____.

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	once/month	24 hr. estimate
Biochemical Oxygen Demand$_5$***	mg/L		30	30	once/month	grab
Total Suspended Solids***	mg/L		60	60	once/month	grab
pH – Units	SU	**		**	once/month	grab
Temperature	°C	*		*	once/month	grab
Dissolved Oxygen	mg/L	*		*	once/month	grab
Outfalls S1 & S2 (Note 1)						
pH – Units	SU	*		*	twice/month	grab
Ammonia as N	mg/L	*		*	twice/month	grab
Temperature	°C	*		*	twice/month	grab
Dissolved Oxygen	mg/L	*		*	twice/month	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE _____. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.
** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units.
*** This facility is required to meet a removal efficiency of 65% or more.

Note 1 – Instream monitoring shall be conducted during the months of May, June, July, August and September.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
   (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
      (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
      (2) controls any pollutant not limited in the permit.
   (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

   The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.

4. Changes in Discharges of Toxic Substances

   The permittee shall notify the Director as soon as it knows or has reason to believe:
   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 µg/L);
      (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
      (4) The level established in Part A of the permit by the Director.
   (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

5. Report as no-discharge when a discharge does not occur during the report period.

C. SPECIAL CONDITIONS (continued)

6. Water Quality Standards
   (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
   (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
      (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
      (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
      (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
      (5) There shall be no significant human health hazard from incidental contact with the water;
      (6) There shall be no acute toxicity to livestock or wildlife watering;
      (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
      (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities
   (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
   (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

8. Instream monitoring is to be conducted during the summer months in order to determine whether or not recent upgrades have been sufficient to cause recovery of the receiving stream. A new water quality review will be conducted after three years to determine if recent upgrades were sufficient to effect a recovery of the receiving stream.

D. INSTREAM MONITORING CONDITIONS

1. Downstream samples should be taken at the locations noted in the FACILITY DESCRIPTION on page 2 of this permit. In the event that a safe, accessible location is not present at this location, a suitable location can be negotiated with the department. Samples should be taken at least four feet from the bank or from the middle of the stream (whichever is less) and 6-inches below the surface. The upstream receiving water sample should be collected at a point upstream from any influence of the effluent, where the water is visibly flowing down stream. If there is no flow in the upstream portion report as no-discharge.

2. When conducting in-stream monitoring, the permittee shall record observations to include: the time of day, weather conditions, unusual stream/lake characteristics (e.g., septic conditions, algae growth, etc.), the stream segment (e.g., riffle, pool or run) or the lake depth from where the sample was collected. These observations shall be submitted with the sample results.

3. Samples shall not be collected from areas with especially turbulent flow, still water or from the stream bank, unless these conditions are representative of the stream reach or no other areas are available for sample collection. Sampling should not be made when significant precipitation has occurred recently. The sampling event should be terminated and rescheduled if the following conditions occur:
   - If turbidity in the stream increases notably
   - If rainfall over the past two weeks exceeds 2.5 inches or exceeds 1 inch in the last 24 hours

4. Always use the correct sampling technique and handling procedure specified for the parameter of interest. Please refer to the latest edition of Standard Methods for the Examination of Water and Wastewater for further discussion of proper sampling techniques. All analyses must be conducted in accordance with an approved EPA method. Meters shall be calibrated immediately (within 1 hour) prior to the sampling event.

5. To obtain accurate measurements, D.O., temperature and pH analyses should be performed on-site in the receiving stream where possible. However, due to high flow conditions, access, etc., it may be necessary to collect a sample in a bucket or other container. When this is necessary, care must be taken not to aerate the sample upon collection. If for any reason samples must be collected from an alternate site from the one listed in the permit, the permittee shall report the location with the sample results.

6. Dissolved oxygen measurements are to be taken during the period from one hour prior to sunrise to one and one-half hour after sunrise.

7. Please contact the department if you need additional instructions or assistance.

Date of Fact Sheet: 8-25-06

Date of Public Notice: September 22, 2006

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
FACT SHEET

This Fact Sheet explains the applicable regulations, rationale for development of this permit and the public participation process.

NPDES PERMIT NUMBER: MO-0035742

FACILITY NAME: Lake Forest Estates Subdivision

OWNER NAME: Lake Forest Estates Community Association

LOCATION: SW ¼, SW ¼, Survey 2046, N ½, Sec. 1 (projected), T37N, R7E, Ste. Genevieve County

RECEIVING STREAM: Big Bottom Creek

FACILITY DESCRIPTION AND RATIONALE

The wastewater treatment facility is composed of a two cell aerated lagoon and a three cell equalization lagoon. sludge is retained in lagoon.

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollutant Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Permits in Missouri are issued by the Director of the Department of Natural Resources under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended).

10 CSR 20-7.031 Missouri Water Quality Standards, Missouri Department of Natural Resources (the Department) "defines the Clean Water Commission water quality objectives in terms of water uses to be maintained and the criteria to protect those uses." The receiving stream's beneficial water uses to be maintained are livestock and wildlife watering, and protection of aquatic life.

To protect these beneficial uses and the water quality of the receiving stream, effluent limitations have been established under federal and state laws. Please see the Water Quality Review Sheet portion of this Fact Sheet for explanation of effluent limit derivation.

This permit will be issued for a period of three years.

Missouri Department of Natural Resources
Water Protection Program
Water Pollution Control Branch
NPDES Permits and Engineering Section

Water Quality Review Sheet
Determination of Effluent Limits

Facility Information

FACILITY NAME: Lake Forest Estates Subdivision WWTF NPDES #: MO-0035742

FACILITY TYPE/DESCRIPTION: Currently a 3 cell lagoon, new facility not determined

ECOREGION: Ozark Highlands 8- DIGIT HUC: 07140101 COUNTY: Ste. Genevieve
Central Irregular Plains Interior River Valleys and Hills Ozark Highlands
Mississippi Alluvial & Loess Plains Western Corn Belt Plains

LEGAL DESCRIPTION: SW ¼, SW ¼, Survey 2046, N ½, Sec. 1 (projected), T37N, R7E LATITUDE/LONGITUDE: +3757223/-09012300

WATER QUALITY HISTORY: Some exceedences for BOD.

Outfall Characteristics

OUTFALL	DESIGN FLOW (CFS)	TREATMENT TYPE	RECEIVING WATERBODY	OTHER
001	.18	Secondary	Big Bottom Creek	303(d)

Receiving Waterbody Information

WATERBODY	CLASS	7Q10(CFS)	*DESIGNATED USES	OTHER CHARACTERISTICS
Big Bottom Creek	C	0.0	LWW, AQL	WBID: 01746

*Cool Water Fishery (CLF), Cold Water Fishery (CDF), Irrigation (IRR), Industrial (IND), Boating & Canoeing (BTG), Drinking Water Supply (DWS), Whole Body Contact Recreation (WBC), Protection of Warm water Aquatic Life and Human Health (AQL), Livestock & Wildlife Watering (LWW)

COMMENTS: Existing facility is the sole source of pollution that places Big Bottom Creek on the 303(d) list for VSS & BOD. Instream data indicates the receiving stream may be recovering. The operating permit will be issued for a period of three years, during which time the permittee will monitor instream dissolved oxygen. A new water quality review will be conducted after three years to determine if further upgrades are necessary.

MIXING CONSIDERATIONS

Mixing Zone (MZ): Not allowed 10 CSR 20-7.031(4)(A)4.B.(I)(a)

Zone of Initial Dilution (ZID): Not allowed 10 CSR 20-7.031(4)(A)4.B.(I)(b)

Permit Limits and Information

TMDL Watershed: (Y or N)	Y	W.L.A. Study Conducted: (Y or N)	Y	Disinfection Required: (Y or N)	N	Use Attainability Analysis: (Y or N)	Y

OUTFALL #001

Wet Test (Y or N): N Frequency: _____ A.E.C. _____ Limit: _____

PARAMETER	Daily Maximum	Weekly Average	Monthly Average	Monitoring Frequency
Flow	Monitor		Monitor	once/month
BOD_5 (mg/L)		30	30	once/month
TSS (mg/L)		60	60	once/month
pH (S.U.)	6-9		6-9	once/month
Ammonia as N (mg/L) (May 1 – Oct 31)	3.7		1.9	once/month
Ammonia as N (mg/L) (Nov 1 – Apr 30)	7.5		3.7	once/month
Dissolved Oxygen(mg/L)	Monitor		Monitor	once/month
Temperature (^oC)	Monitor		Monitor	once/month

Receiving Water Monitoring Requirements

OUTFALL #S1 & S2

PARAMETER	Daily Maximum	Weekly Average	Monthly Average	Monitoring Frequency
Flow	Monitor			Twice/month
Dissolved Oxygen(mg/L)	Monitor			Twice/month
Temperature (^oC)	Monitor			Twice/month
pH (S.U.)	Monitor			Twice/month

Derivation and Discussion of Limits

Wasteload allocations (WLA) were calculated using water quality criteria and the dilution equation below:

$$C = \frac{(C_s * Q_s) + (C_e * Q_e)}{(Q_e + Q_s)}$$ (EPA/505/2-90-001, Section 4.5.5)

Where C = downstream concentration
C_s = upstream concentration
Q_s = upstream flow (cfs)
C_e = effluent concentration
Q_e = effluent flow (cfs)

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload

allocations were determined using applicable acute water quality criteria (CMC: criteria maximum concentration) and stream volume of flow.

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

Outfall #001 – Main Facility Outfall

- **Biochemical Oxygen Demand (BOD_5)** Limits carried over from previous permit.

- **Total Suspended Solids (TSS)** Limits carried over from previous permit.

- **pH.** pH shall be maintained above six (6) standard units [10 CSR 20-7.015(8)(B)2.].

- **Total Ammonia Nitrogen.** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3]. Background total ammonia nitrogen = 0.01 mg/L

Season	Temp (^oC)	pH (SU)	Total Ammonia Nitrogen CCC (mg/L)	Total Ammonia Nitrogen CMC (mg/L)
Summer	26	7.8	1.5	12.1
Winter	6	7.8	3.1	12.1

Summer: May 1 – October 31, Winter: November 1 – April 30

Summer

Chronic WLA: $C_e = ((0.18 + 0.0)1.5 – (0.0 * 0.01))/0.18$
$C_e = 1.5$ mg/L

Acute WLA: $C_e = ((0.18 + 0.0)12.1 – (0.0 * 0.01))/0.18$
$C_e = 12.1$ mg/L

$LTA_c = 1.5$ mg/L (0.780) = 1.2 mg/L [CV = 0.6, 99th Percentile, n = 30]
$LTA_a = 12.1$ mg/L (0.321) = 3.9 mg/L [CV = 0.6, 99th Percentile]

MDL = 1.2 mg/L * 3.11 = 3.7 mg/L [CV = 0.6, 99th Percentile]
AML = 1.2 mg/L * 1.55 = 1.9 mg/L [CV = 0.6, 95th Percentile, n = 4]

Winter

Chronic WLA: $C_e = ((0.18 + 0.0)3.1 – (0.0 * 0.01))/0.18$
$C_e = 3.1$ mg/L

Acute WLA: $C_e = ((0.18 + 0.0)12.1 – (0.0 * 0.01))/0.18$
$C_e = 12.1$ mg/L

$LTA_c = 3.1$ mg/L (0.780) = 2.4 mg/L [CV = 0.6, 99th Percentile, n = 30]
$LTA_a = 12.1$ mg/L (0.321) = 3.9 mg/L [CV = 0.6, 99th Percentile]

MDL = 2.4 mg/L * 3.11 = 7.5 mg/L [CV = 0.6, 99th Percentile]
AML = 2.4 mg/L * 1.55 = 3.7 mg/L [CV = 0.6, 95th Percentile, n = 4]

- **Temperature** Monitoring required because the toxicity of Ammonia varies by temperature.

- **Dissolved Oxygen** Monitoring to gather data for modeling at renewal.

Receiving Water Monitoring

- **Monitoring for Dissolved Oxygen, pH, Temperature & Ammonia as Nitrogen** Monitoring to determine if the receiving stream has recovered and is now meeting water quality standards.

Reviewer: Curt Gateley
Date: 9-19-05
Unit Chief: Refaat Mefrakis
Revised: 8-25-06

Monitoring and effluent limits contained within this document have been developed in accordance with EPA guidelines using the best available data and are believed to be consistent with Missouri's Water Quality Standards and Effluent Regulations. If additional water quality data or are available that may affect the recommended monitoring and effluent limits, please forward these data and information to the author.